

ABSTRACT OF THE DISCLOSURE

A closure mechanism for a hopper bottom trailer which utilizes potential and kinetic energy of granular material in the hopper. The hopper closure assembly may have an angled member upon a gate that translates kinetic energy for moving granular material into longitudinal movement of the gate. The hopper closure assembly may have a raising structure which lifts the gate relative to the gate frame to create potential energy to assist in movement of the gate down the raising structure and in opening the discharge opening of the hopper. A method of using a hopper closure assembly which involves the steps opening the discharge opening by moving the gate longitudinally, also including the steps permitting the granular material to assist in opening the gate by striking the angled member, and additionally permitting the leading edge to move from the receiving member of the gate frame by descent from the raising structure.